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Daniel B. Ruble
Registration No. 40,794

DATE: June 1, 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Kannankeril	Examiner: V. Chang	
Serial No.:	09/998,807	Group Art Unit: 1771	
Filed:	November 1, 2001	Docket:	D-30221-01
For:	Insulating Composite Materials and Methods for Producing and Using Same		

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BRIEF ON APPEAL

This Brief is filed in triplicate in support of a Notice of Appeal mailed February 25, 2004 and received by the Patent Office on March 1, 2004, the period for filing having been extended to June 1, 2004 by the attached Petition for Extension of Time. Appellant appealed from the Office Action mailed September 25, 2003, which finally rejected all pending claims of the above-referenced patent application.

Please charge the $330 fee believed due under 35 C.F.R. § 1.17(c) for filing this Brief, as well as any additional fees or crediting any overpayments, to Account No. 07-1765.

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Real Party in Interest

The real party in interest is Sealed Air Corporation (US), assignee of the above-referenced patent application.

Related Appeals and Interferences

There are no other appeals or interferences known to Appellant, the Appellant's legal representative, or assignee which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 19-24, 26-31, 33-39, 41, 44-45, and 47-50 are pending. Claims 1-18, 25, 32, 40, 42-43, and 46 were canceled. Claims 19-24, 26-31, 33-39, 41, 44-45, and 47-50 are appealed. A copy of these claims appears in the Appendix.

Status of Amendments

Appellant filed a Response After Final on February 25, 2004 amending claims 19, 21, 27-29, 33-34, 36, 39, 41, 45, and 47. In the Advisory Action mailed March 17, 2004, the Examiner stated that the proposed amendments will be entered. Accordingly, the copy of the appealed claims in the Appendix shows the claims in the amended form.

Summary of the Invention

The present invention is directed to an article comprising an insulating sheet 110 and a first backing sheet 108. (Page 4, lines 21-31; Figure 3.) The insulating sheet comprises first and second films 115, 116 secured to each other at a plurality of land areas 113 to define a plurality of gas-filled cavities 12 between the first and second films. The insulating sheet 110 also defines a plurality of perforations 120 through the first and second films in the land areas. (Page 4, lines 24-26.) This allows water vapor to pass through the insulating sheet. (*Id.*) The first backing sheet is secured to the insulating sheet in generally contiguous relation to the insulating sheet. (Page 5, lines 14-20.) The first backing sheet allows water vapor to pass through the first backing sheet, while preventing liquid water from passing through the first

backing sheet. (Page 3, lines 24-26.)

Issues

The issues presented for review are whether pending claims 19-24, 26-31, 33-39, 41, 44-45, and 47-50 are obvious under 35 U.S.C. § 103(a) in view of U.S. Patent 6,514,596 to Orologio combined with U.S. Patent 6,355,333 to Waggoner.

Grouping of Claims

The Examiner has grouped claims 19-24, 26-31, 33-39, 41, 44-45, and 47-50 together for an obviousness rejection. These claims do not stand or fall together. Appellant explains below why dependent claims 20-21, 28, 39, 41, 44-45, 47, and 49 are believed to be separately patentable. Solely for the purpose of this appeal on the basis of the lack of establishment of a *prima facie* obviousness case by the proposed combination of references, the remainder of the claims of this group are deemed to stand or fall together.

Argument

I. The claims are patentable over the proposed combination of Orologio and Waggoner.

Claims 19-24, 26-31, 33-39, 41, 44-45, and 47-50 were rejected under 35 U.S.C. § 103(a) as obvious in view of U.S. Patent 6,514,596 to Orologio combined with U.S. Patent 6,355,333 to Waggoner. (Office Action mailed Sept. 23, 2003 at page 2, §5.) Appellant respectfully traverses this rejection.

A. Orologio

Orologio discloses a moisture resistant insulation sheet. (Column 2, lines 5-8.) An aluminum foil is "bonded to a single or double layer of polyethylene-formed bubbles spaced . . . in the so-called 'bubble-pack' arrangement." (Column 1, lines 35-38.) The "aluminum foil enhances the thermal insulation of the air-containing bubble-pack." (Column 1, lines 44-45.) Orologio also teaches that "a thin foil of metal or a metallized thermoplastic film" can be "interposed between and bonded to" first and second bubble-pack sheets. (Column 2, lines 29-31; Figure 3.) The aluminum or metallized film within the assembly enhances reflection of infra-

red radiation. (Column 2, lines 58-62.) The aluminum foil 102 essentially eliminates heat transfer by radiation. (Column 4, lines 10-12; Figure 3.) The first and second bubble-pack sheets 112, 114 provide thermal conduction and convection insulation. (Column 4, lines 13-17.)

B. Waggoner

Waggoner teaches a textured barrier sheet material designed to be incorporated into the wall of a structure to prevent the intrusion of incidental water that may pass through the external facade of the wall. Water intrusion may cause mold or rot. A barrier sheet should be substantially impermeable to liquid water, but should not trap moisture vapor within the wall. Example of barrier sheets include perforated polymer films and spunbonded polymer sheets. (Column 1, lines 22-55.) The textured barrier sheet 40 includes "channel means" for providing a liquid water flow path. The channel means may be grooves or other textured features. (Column 6, lines 1-11; Figures 2-7, 11-17.) The textured barrier sheet may be incorporated into "hybrid systems" in which the "the barrier sheet 40 is used as the moisture barrier between the structure and a foam board 80." (Column 19, lines 28-36; Figure 7.) In hybrid systems, the foam board "may be screwed, nailed or otherwise fastened over the barrier sheet." (Column 3, lines 25-33.)

C. The combination of Orologio and Waggoner fails to teach all of the claim 19 recitations.

Appellant respectfully submits that a *prima facie* case of obviousness has not been established with respect to independent claim 19 to shift the burden of rebuttal to the Appellant. A claimed invention is not obvious in view of a combination that fails to teach or suggest all of the claim recitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (cited by MPEP §2143.03). Each claim recitation must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970) (cited by MPEP §2143.03).

Neither Orologio nor Waggoner discloses, teaches, or suggests an "insulating sheet" defining both "a plurality of gas-filled cavities" and "perforations," as recited in claim 19. Accordingly, a combination of these references cannot teach or suggest the perforated insulating sheet having gas-filled cavities as recited in claim 19.

Orologio fails to teach anything regarding perforations – much less anything regarding a perforated *insulating* sheet.

It is true that Waggoner teaches that "barrier sheet materials" include "perforated polymer films." (Column 1, lines 42-46.) However, Waggoner fails to suggest anything regarding an *insulating sheet* defining perforations, much less suggest anything regarding an insulating sheet defining both gas filled cavities and perforations, as recited in claim 19. The perforated *barrier* sheet of Waggoner is *not*, and suggests nothing regarding, a perforated *insulating* sheet as recited in claim 19. Apparently, the closest Waggoner comes to teaching an insulating sheet of any type is an "insulating foam board" that may be "applied over the barrier sheet." (Column 3, lines 29-30.)

Since neither reference teaches a perforated insulating sheet, even if Waggoner were combined with Orologio, a *prima facie* case of obviousness is not established because the proposed combination of references fails to teach or suggest *all* of the claim recitations. Thus, the *combination* of references is insufficient to establish *prima facie* obviousness.

D. The Examiner has failed to establish a motivation to perforate the Orologio moisture insulating sheet in the land areas.

The previous Office Actions state that "it would have been obvious to perforate Orologio's insulation bubble-pack in the land area." (Office Action mailed March 17, 2004 at page 2, §3; Office Action mailed September 25, 2003 at page 3, lines 9-14.) To support this conclusion, the Examiner points to the motivation of obtaining "a waterproof sheet having an improved moisture permeability, so as to reduce the rot, mold, and mildew ([Waggoner,] column 19, lines 15-27.)" (Office Action mailed March 17, 2004 at page 2, §3.)

Yet the Examiner fails to point out any objective evidence of record to support his conclusion that perforating the Orologio bubble-pack insulating sheet in the land areas provides a "waterproof" sheet.

Further, perforating the Orologio insulating sheet runs *directly contrary* to Orologio teachings of "a moisture insulation sheet" and a "moisture resistant insulative sheet" and an "insulative sheet that provides . . . moisture insulation enhancement." (Column 2, lines 6, 10-11, and 14-15; column 3, lines 18-23.) Perforating the Orologio insulating sheet to increase

the moisture permeability is directly opposite of Orologio's teaching of a "moisture resistant" insulating sheet. Accordingly, there is no objective evidence of record supporting a motivation to perforate the land areas of the Orologio insulating sheet.

E. The dependent claims are also patentable over the proposed combined art.

The Office Actions failed to specifically address the dependent concepts of claims 20-21, 28, 39, 41, 44-45, 47, and 49. Accordingly, Appellant respectfully asserts that a *prima facie* case of obviousness has not been established for these claims to shift the burden of rebuttal to Appellant.

Regarding claims 20-21, the proposed combination of references fails to teach or suggest the recitation of a "second backing sheet."

Regarding claim 28, the proposed combination of references fails to teach or suggest a first backing sheet having the recited fusion temperature attribute.

Regarding claim 39, the proposed combination of references fails to teach or suggest portions of the first backing sheet laminated to the insulating sheet.

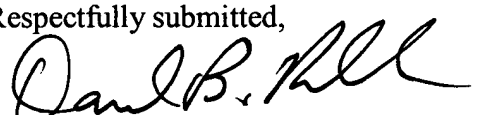
Regarding claims 41, 44-45, and 49, the proposed combination of references fails to teach or suggest an adhesive in the recited configuration.

Regarding claim 47, the proposed combination of references fails to teach or suggest securing the first backing sheet to the insulating sheet.

II. Conclusion

For the foregoing reasons, Appellant respectfully requests that the rejections be reversed.

Respectfully submitted,



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Appendix

1.-18. (Canceled)

19. (Previously Presented) An article comprising:

an insulating sheet comprising first and second films secured to each other at a plurality of land areas to define a plurality of gas-filled cavities between the first and second films, wherein the insulating sheet defines a plurality of perforations through the first and second films in the land areas allowing water vapor to pass through the insulating sheet; and

a first backing sheet secured to the insulating sheet in generally contiguous relation to the insulating sheet, wherein the first backing sheet allows water vapor to pass through the first backing sheet while preventing liquid water from passing through the first backing sheet.

20. (Previously Presented) The article of Claim 19 further comprising a second backing sheet secured to the insulating sheet in generally contiguous relation to the insulating sheet, wherein the second backing sheet allows water vapor to pass through the second backing sheet while preventing liquid water from passing through the second backing sheet.

21. (Previously Presented) The article of Claim 20 wherein the insulating sheet is positioned between the first backing sheet and the second backing sheet.

22. (Previously Presented) The article of Claim 19 wherein the first and second films comprise thermoplastic films and the first and second films are laminated together.

23. (Previously Presented) The article of Claim 19 wherein one or more of the first and second films comprise a coextruded film.

24. (Previously Presented) The article of Claim 19 wherein one or more of the first and second films comprises nylon.

25. (Canceled)

26. (Previously Presented) The article of Claim 19 wherein the first and second films comprise low density polyethylene.

27. (Previously Presented) The article of Claim 19 wherein the first backing sheet comprises a thermoplastic polymer.

28. (Previously Presented) The article of Claim 19 wherein the first backing sheet has a fusion temperature at least slightly above a fusion temperature associated with the first and second films.

29. (Previously Presented) The article of Claim 19 wherein the first backing sheet comprises a high density polyethylene.

30. (Previously Presented) The article of Claim 19 wherein the first or second films comprise a polymer selected from polyvinyl chloride polymer, polyvinylidene chloride polymer, and olefinic polymer.

31. (Previously Presented) The article of Claim 30 wherein the olefinic polymer comprises polyethylene.

32. (Canceled)

33. (Previously Presented) The article of Claim 19 wherein the first backing sheet comprises a non-woven polyester.

34. (Previously Presented) The article of Claim 19 wherein the first backing sheet comprises an olefinic polymer.

35. (Previously Presented) The article of Claim 34 wherein the olefinic polymer comprises a polymer selected from one or more of polyethylene and polypropylene.

36. (Previously Presented) The article of Claim 19 wherein the first backing sheet comprises thermoplastic fibers.

37. (Previously Presented) The article of Claim 36 wherein the thermoplastic fibers comprise olefinic polymer fibers.

38. (Previously Presented) The article of Claim 37 wherein the olefinic polymer fibers are selected from the group consisting of polyethylene fibers and polypropylene fibers.

39. (Previously Presented) The article of Claim 19 wherein portions of the first backing sheet are laminated to the insulating sheet.

40. (Canceled)

41. (Previously Presented) The article of Claim 19 wherein portions of the first backing sheet and the insulating sheet are adhesively secured to each other.

42.-43. (Canceled)

44. (Previously Presented) The article of Claim 19 comprising an adhesive along at least a portion of the insulating sheet for securing the article to a structure.

45. (Previously Presented) The article of Claim 19 comprising an adhesive along at least a portion of the first backing sheet for securing the article to a structure.

46. (Canceled)

47. (Previously Presented) A method of forming the article of Claim 19 comprising the steps of:

providing the insulating sheet;

providing the first backing sheet; and

securing the first backing sheet in generally superposed, contiguous relation to the insulating sheet.

48. (Previously Presented) A method for insulating a structure comprising the step of at least partially wrapping the structure with the article of Claim 19.

49. (Previously Presented) The method of Claim 48 wherein the article is secured to the structure with an adhesive.

50. (Previously Presented) The method of Claim 48 wherein the structure comprises a building.